

REMARKS

Claims 10 through 19 were presented for examination in the present application. The instant amendment cancels claim 19 without prejudice and adds new claim 20. Thus, claims 10 through 18 and 20 are presented for consideration upon entry of the instant amendment.

The Office Action asserts that the Information Disclosure Statement ("IDS") filed July 14, 2006 fails to comply with the provisions of 37 C.F.R. 1.97, 1.98, and M.P.E.P. 609. Applicants submit herewith a supplemental IDS in compliance with the provisions of 37 C.F.R. 1.97, 1.98, and M.P.E.P. 609.

Claim 19 has been cancelled thus rendering moot the rejections to claim 19. Reconsideration and withdrawal of the rejections to claim 19 are respectfully requested.

Claim 16 was objected to because of informalities. Claim 16 has been amended accordingly. Reconsideration and withdrawal of the objection to claim 16 are respectfully requested.

Claims 10, 12, 13, 15, and 17 through 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,903,025 ("Farrington") in view of U.S. Patent No. 5,262,043 ("Boenigk"). Claims 11 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Farrington in view of Boenigk and further in view of U.S. Patent No. 3,285,760 ("Hildinger"). Claim 16 was rejected under 35 U.S.C. 103(a) as being unpatentable over Farrington in view of Boenigk and further in view of GB 690,859 ("Crawley").

Applicants respectfully traverse these rejections as the cited combination of references fails to disclose or suggest the elements of the pending claims.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Independent claim 10 now recites "wherein said liquic graphitable binder agent consists essentially of a concentration of said powdery, graphitable coal-tar pitch in an amount of 10 to 65% by weight in a high boiling aromatic oil (emphasis added)".

Farrington describes a binder composition comprising pitch, an aqueous solution of a water soluble resin and an organic solvent solution of a thermosetting polymer. This binder composition serves as a binder for refractory particles. The pitch has an estimated benzo[a]pyrene content of 5,000 ppm. In Farrington, the pitch is added to overcome the susceptibility

to oxidation of the thermosetting polymer derived carbon structure. According to Farrington, the pitch is used as a powder and is not solved or partially solved. The pitch will only become active as a binder component at the subsequent tempering step at 550° F (290° C). At this stage, it melts and wets the solid particles and connects adjacent particles. Farrington's liquid binder components (components b and c of column 3, lines 59 - 65) do not result in the anisotropic coke structure which is desired in the present claimed invention. Thus, in spite of the addition of pitch, the binder of Farrington cannot present the anisotropic coke structure.

It is clear, therefore, that Farrington does not disclose or suggest a graphitable binder agent that comprises a concentration of said powdery, graphitable coal-tar pitch as required by claim 1.

Boenigk teaches a method for the production of an organic binder and simple refractories for making use of the organic binder. Specifically, Example 4 discloses the preparation of an electrode binding agent in which 72 parts by weight of the coal-tar pitch of Example 1 were dissolved in 28 parts by weight of anthracene oil at a temperature of 200° C. The binding agent is solid at room temperature. Clearly, this is in contrast to claim 10 which requires the presence of a graphitable binder agent that is liquid at room temperature. Boenigk does not disclose or suggest a liquid graphitable binder agent as a further component in the manufacture of carbon-bonded refractory products.

Hildinger describes a refractory composition capable of being rammed and remaining in flowable particulate form after an extended period of storage at a temperature of 40° F. The refractory composition of Hildinger consists of non-acid refractory particles, a solid particulate pitch, and an anthracene oil. The anthracene oil is used as a solvent or lubricant for the powdered pitch. Through the use of the solvent, the storage properties of the admixture are improved and improved rammed densities are obtained. The anthracene oil mentioned in claim 1 of Hildinger is not a graphitable binder that is a liquid at room temperature and has a coking value of at least about 15% by weight as claimed. Actually, anthracene oil has a coking value of less than 2% by weight.

Thus, as with the other cited art, Hildinger does not disclose or suggest "a graphitable binder agent that is liquid at room temperature with a coking value of at least about 15% by weight" as required by claim 10.

It is clear, therefore, that the cited art, either alone or in combination, does not disclose or suggest the elements of claim 10. Each of the cited art references fails to disclose independent claim 10, and the cited combination of art fails to cure these deficiencies. Thus, claim 10 is clearly in condition for allowance.

Claims 11 through 18 depend from independent claim 10 and are in condition for allowance for at least the reasons given above for claim 10. Reconsideration and withdrawal of the rejections to claims 10 through 18 are respectfully requested.

New claim 20 has been added to point out various aspects of the present application. Support for new claim 20 can be found in the specification at least at page 6, line 5.

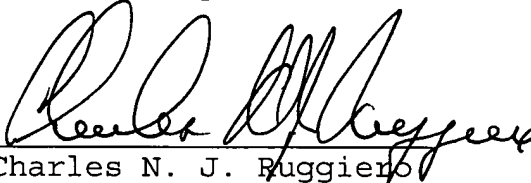
It is believed that new claim 20 is in condition for allowance. For example, new claim 20 depends from independent claim 10 and is in condition for allowance for at least the reasons given above for claim 10. Furthermore, claim 20 recites "wherein the heat treating step results in the carbon-bonded refractory product having an anisotropic coke structure (emphasis added)". Applicants submit that none of the cited references, either alone or in combination, disclose or suggest a carbon-bonded refractory product having an anisotropic coke structure.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,

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